



Executive Director's  
Report to the

Board of Harbor Commissioners

**DATE: MAY 9, 2012**

**FROM: ENGINEERING**

**SUBJECT: RESOLUTION NO. \_\_\_\_\_ – APPROVAL OF GRANT APPLICATION TO THE UNITED STATES DEPARTMENT OF ENERGY'S OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY'S WIND AND WATER POWER PROGRAM FOR THE PORT OF LOS ANGELES OFFSHORE WIND POWER INSTALLATION**

**SUMMARY:**

The United States (US) Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) issued a Financial Assistance Funding Opportunity Announcement (FOA) for "US Offshore Wind: Advanced Technology Demonstration Projects" worth \$180 million. Applying for funding under this FOA would allow the City of Los Angeles Harbor Department (Harbor Department) to obtain both financial and technical assistance from the DOE to install wind power at the Port of Los Angeles (Port). In order to be eligible to submit an Application to compete for an award under this FOA the Harbor Department had to submit a Pre-Application, which included a Concept Paper and Letter of Intent, by the Pre-Application deadline of March 30, 2012. In the Pre-Application the Harbor Department proposed the "Port of Los Angeles Offshore Wind Power Installation" project (Project) for installation of two or three wind turbines with a capacity of 3-5 MW each for a total maximum power output of 9-15 MW in or near the Port. The power generated by the wind turbines will be transmitted to the Port to reduce greenhouse gas emissions.

The estimated project cost is \$31 million; \$17 million would be reimbursed by the grant (if selected) and the \$14 million balance would be paid by the Harbor Department.

**RECOMMENDATION:**

It is recommended that the Board of Harbor Commissioners (Board):

1. Authorize and direct the Executive Director to apply to the United States Department of Energy for an award of up to \$17 million under the "Offshore Wind: Advanced Technology Demonstration Projects" Funding Opportunity Announcement to fund the Port of Los Angeles Wind Power Installation;
2. Authorize and direct the Executive Director to negotiate and return to the Board for consideration of any grant agreement (awards) with the United States Department of Energy; and
3. Adopt Resolution No. \_\_\_\_\_.



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**DISCUSSION:**

Background - Antonio R. Villaraigosa, Mayor of the City of Los Angeles, the City of Los Angeles Harbor Department, and Edmund G. Brown Jr., Attorney General of the State of California (State), on behalf of the People of the State of California, entered into a memorandum of understanding (State MOU) (Transmittal 1) creating a partnership to reduce greenhouse gases (GHG) and supporting the Port's Clean Air Action Plan on December 7, 2007. Under the terms of the State MOU the Harbor Department agreed to install a total of ten megawatts (MW) of photovoltaic (PV) solar power systems (PV Systems) within the Port's boundary by the end of calendar year 2012.

On March 19, 2009, the Harbor Department awarded a construction contract to Cupertino Electric of San Jose, CA to install a one MW PV System on the roof of the Berths 93 A&B Cruise Terminal building as the first phase of solar power required under the terms of the State MOU. Cupertino Electric had substantially completed the project on October 20, 2010. The final contract amount was \$7,749,114, and the Harbor Department received a \$2,500,000 solar rebate from Los Angeles Department of Water & Power (LADWP). This brings the installed cost to approximately \$5.50 per Kw/hour. Extrapolating the final installed cost towards the entire 10 MW commitment would presumably bring the Harbor Department's total investment for PV Systems to \$50 million.

On December 14, 2009, the Board approved the "Solar Power System Memorandum of Understanding" between LADWP and the Harbor Department (LADWP MOU) (Transmittal 2). The LADWP MOU sets the general terms by which LADWP and the Harbor Department will cooperate to install nine additional MW of PV Systems. It relieves the Harbor Department from the substantial costs associated with installing PV Systems with its own funds while allowing LADWP to generate power from the roofs of the Port's many warehouses. After jointly determining sites within the Port for PV Systems, LADWP will, at its expense, install, own, and operate PV Systems on Harbor Department property. LADWP will also own and receive all of the power generated from the PV Systems. For its part, the Harbor Department would, amongst other requirements, strive to make available facilities which have 25 years of useful life remaining for the subject roofs or substrates where these PV System are to be installed. The Harbor Department hopes to fulfill its obligations under the terms of the State MOU for ten MW of PV solar power capacity within the Port, and LADWP would be that much closer to meeting its goal of generating 20% of the City's power from renewable sources by 2010 and 33% by 2020.



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As of April 2012, the Harbor Department has 1,091 kilowatts (kW) of PV Systems installed, another 477 kW are under construction by LADWP, and 2,408 kW are being Processed for construction sometime in 2014. This brings the total anticipated installation of PV Systems to 3,976 kW (3.976 MW). The Harbor Department will not meet the schedule under the terms of the State MOU. Unforeseen challenges have contributed to missing the schedule such as the building selection process and obtaining permits. The hope is that subsequent phases of PV Systems will proceed faster with the lessons learned from past installations. As a means of expediting the installation of ten MW of zero-emissions electrical power generation capacity, the Harbor Department, with the assistance of LADWP, determined that the installation of wind power would add a lower cost alternative, compared to solar power, to its renewable energy portfolio. The Harbor Department is going through the process of issuing a directive to one of its on-call engineering consultants to undergo a wind study to determine the Port's wind resources and the feasibility of installing ground mounted wind turbines.

Offshore Wind – On March 6, 2012, the DOE's Office of Energy Efficiency and Renewable Energy (EERE) issued a FOA for "US Offshore Wind: Advanced Technology Demonstration Projects" (Transmittal 3). The budget for this FOA would be \$180 million, subject to annual Congressional appropriations. In support of US national energy strategy, the EERE invests in clean energy technologies that strengthen the economy, protect the environment, and reduce dependence on foreign oil. Wind power contributes to these objectives through the deployment of clean, affordable, reliable and domestic energy. To achieve US wind generation objectives, the DOE recognizes that multiple goals must be met, such as reducing the cost of wind energy, providing efficient and reliable delivery, leveraging diverse wind energy sources, inspiring innovation, reducing or eliminating barriers, and attracting investment. In fiscal year 2011, the Wind and Water Power Program within the DOE EERE released a formal Offshore Wind Innovation and Demonstration (OSWInD) initiative, consistent with the goals listed above, to promote and accelerate responsible commercial offshore wind development in the US. In February 2011, DOE, in partnership with the Department of the Interior (DOI), released the National Offshore Wind Strategy. This strategy addresses two critical objectives in pursuit of overcoming offshore wind power barriers: reducing the cost of energy compared to other electrical generation sources; and reducing deployment timelines and uncertainties limiting US offshore wind project development. To realize these objectives, OSWInD activities were scheduled under three focus areas with Advanced Technology Demonstration Projects being the last. DOE seeks to provide support for regionally-diverse Advanced Technology Demonstration Projects through collaborative partnerships. The primary goals for these projects are to "install innovative offshore wind systems in US water in the most rapid and responsible manner



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possible” and “expedite the development and deployment of innovative offshore wind energy systems with a credible potential for lowering the levelized cost of energy (LCOE) below 10 ¢/kWh (kilowatt hour) or the local “hurdle” price at which offshore wind can compete with other regional generation sources without subsidies.”

Application Process – To meet its goals, DOE divided the offshore wind FOA into two Topic Areas. Topic Area 1: “Accelerating Pilot Deployment” is targeted for “fast-track” projects that are substantially in progress with their planning and permitting to meet the end of calendar year 2014 deadline for commissioning. Only one project will be selected for this Topic Area with a maximum award of \$20 million. Topic Area 2: “Innovating Commercial Viability” is to be broader in scope and longer in duration, focusing on introducing technology innovations to the market. Topic Area 2 will be executed over five budget periods, each one year in length. Up to five projects will be selected under Topic Area 2 to share \$160 million with a maximum possible award of \$50.7 million.

The application process will consist of a Pre-Application followed by an Application. Applications will be accepted under either Topic Areas or both. If both, a separate Pre-Application and Application will be required and only one will receive an award. The Harbor Department determined that it has a higher probability of receiving an award under Topic Area 2 since it had just started its wind power program. On March 30, 2012, the Engineering Division submitted its Pre-Application through the EERE Exchange website. Both a Concept Paper and a Letter of Intent (LOI) were submitted with the Pre-Application (Transmittals 4 & 5). Submitting a LOI does not commit an applicant to submit an Application. Its purpose is to help the DOE plan for the merit review.

The Application is due May 31, 2012 at 11:59 PM ET. In the Application, the Port of Los Angeles Wind Power Installation must be described with enough detail for the DOE to determine its viability and compare it to other project submissions. If an award is granted to the Harbor Department, the period of performance under Topic Area 2 will be from September 2012 to September 2017.

Project Description – The Port of Los Angeles Wind Power Installation will consist of two or three wind turbines with a capacity of 3-5 MW each for a total maximum power output of 9-15 MW in or near the Port. The Harbor Department will conduct a wind study of the Port to determine the most favorable location and height for ground mounted wind turbines. The scope of the study will also include identifying offshore locations for wind turbines. The wind study is being conducted outside of the scope of the FOA since it was already in the planning stages when the FOA was issued. LADWP will determine the most favorable method of connecting the wind turbines either directly to the Port or to its electrical grid. DOE will provide financial and technical assistance. Financial



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assistance will be in the form of an award of up to \$17 million under this FOA. Technical assistance will be with such things as permitting and environmental reviews under the National Environmental Policy Act (NEPA) and the California Environmental

Quality Act (CEQA). The Harbor Department will provide cost share funding up to \$14 million. cost sharing will be governed by the specific rules described for State and Local Governments found at 10 CFR 600.224 (Transmittal 6) with an approximate ratio of 55% grant:45% cost share.

At this point in the application process there are several uncertainties which may affect this Project. The siting of the wind turbines will determine the type of foundation that will be required. The deeper the water in which the wind turbines are sited the more costly the foundation. In addition, the method of power transmission from the wind turbines to the electrical grid/Port has not been determined. The costs for transmission may also be affected by the depth of the water. DOE's aggressive schedule for power delivery will require an equally aggressive schedule for NEPA/CEQA review. Completion of the wind study will further clarify project requirement, validity, and cost, but will not be available before the application deadline. Regardless of final scope, schedule, and budget, the grant will only reimburse the Harbor Department \$17 million. The Harbor Department would be responsible for all additional costs which could exceed the estimated \$14 million dollar cost share.

#### **ENVIRONMENTAL ASSESSMENT:**

The proposed action is approval to apply to the US DOE for funding under the "Offshore Wind: Advanced Technology Demonstration Projects" FOA. This action is limited to the grant application process and does not include approval of the Port of Los Angeles Wind Power Installation proposal or any other project that may be constructed using the funding, which would be subject to environmental review under CEQA and NEPA. As an administrative activity, the Director of Environmental Management has determined the proposed action is exempt from the California Environmental Quality Act (CEQA) in accordance with Article II, Section 2(f) of the Los Angeles City CEQA Guidelines.

#### **ECONOMIC BENEFITS:**

Approval to apply to the US DOE for the funding of the Port of Los Angeles Wind Power Installation will have no direct employment impact for the five-county region. The Proposed project is anticipated to have significant economic impacts for the region and staff will be able to fully evaluate economic benefits when a detail cost analysis of the project is available.

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**FINANCIAL IMPACT:**

Approval to proceed with the grant application will obligate the Harbor Department to participate in the funding of the Port of Los Angeles Wind Power Installation if it receives an award from the DOE. For an award of up to \$17 million from the DOE, the Harbor Department must cost share approximately \$14 million. Together, the total project cost will be approximately \$31 million. A detailed cost/benefit analysis will be performed upon completion of the wind study which will refine project scope, schedule, and budget. One of the financial uncertainties is that the DOE's award is subject to annual Congressional appropriations. If Congress decides not to fund the FOA the Harbor Department may be left responsibility for the entire cost of the Project.



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CITY ATTORNEY:

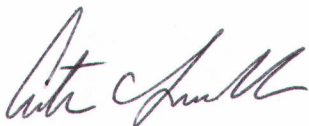
The Office of the City Attorney has reviewed the Board Report and determined that this matter raises no legal issues at this time.

TRANSMITTALS:

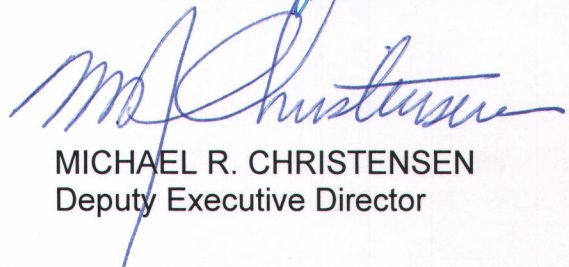
1. Memorandum of Understanding Between the State of California, the Office of the Mayor of the City of Los Angeles, and the City of Los Angeles Harbor Department Creating a partnership to Reduce Greenhouse Gases and Support the Port of Los Angeles Clean Air Action Plan.
2. Solar Power System Memorandum of Understanding.
3. Financial Assistance Funding Opportunity Announcement "US Offshore Wind: Advanced Technology Demonstration Projects" Number DE-FOA-0000410.
4. Concept Paper Details for Funding Opportunity Announcement Number DE-FOA-0000410.
5. Letter of Intent for Funding Opportunity Announcement Number DE-FOA-0000410.
6. Code of Federal Regulations 10 CFR 600.224.

FIS Approval:  (initials)

CA Approval:  (initials)

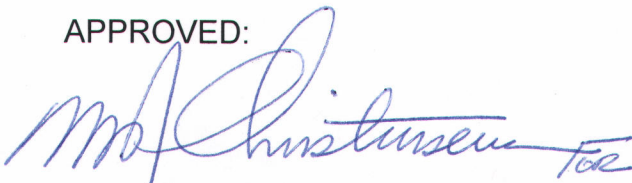


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